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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/411,629	10/01/1999	WATARU NARA	0557-4784-2	8585

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/411,629

Applicant(s)

NARA, WATARU

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 & 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 7 & 9 – 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Ide et al (US 6,304,292).

Regarding claim 1, Ide discloses an image apparatus comprising:

photoelectrically converting means for photoelectrically converting image information obtained from optically reading an original image, line by line, and outputting an image signal, said photoelectrically converting means having optically shielding means provided at a portion thereof (see Fig. 10; col. 4, lines 43-46);

black shading correction means (30) for correcting the image signal using black reference level, the black reference level being obtained from the portion of the photoelectrically converting means for each line during an operation of the reading of the original image (see Figs. 9-11; col. 6, lines 52-58);

wherein the black reference level used by the black shading correcting means for each line is obtained using black reference values, each of the black reference values being data of the portion of the photoelectrically converting means for a respective one of a plurality of lines (col. 6, lines 52-58; col. 9, lines 17-25).

Regarding claim 2, Ide discloses that wherein the black reference level is a weighted average of the black reference values (see col. 6, lines 52-58; col. 9, lines 17-25).

Regarding claim 3, the black reference value for respective line is an average of pixel value in a main scan direction (Fig. 10; wherein the main scan direction shown in arrow of scanning direction) and the weighted average of the black reference value is obtained from weighted-averaging, in a sub-scan direction (vertical scanning direction), the black values (see col. 9, lines 17-25).

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Regarding claim 4, the black reference level for each line is obtained from weighted-averaging the black reference for the current line and the black reference level for the preceding line as also described in col. 9, lines 17-25.

Regarding claim 5, Ide shows that the black reference level is a moving average (i.e., average of one line and a preceding line) of the black reference values (col. 9, lines 17-25).

Regarding claim 6, the black reference for a respective line is an average of pixel values in a main scan direction (as shown in Fig. 10), the moving average being obtained from moving-averaging, in a sub-scan direction (i.e., a current line and a preceding line in vertical scanning), the black reference values (see col. 6, lines 52-58; col. 9, lines 17-25).

Regarding claim 7, the black reference level for each line is obtained from moving-averaging the black reference values for the plurality of lines (a current line and a preceding line; also see col. 9, lines 17-25).

Regarding claim 9, the claimed limitations are accommodated with respect to claim 1.

Regarding claim 10, the claimed limitation is accommodated with respect to claim 2.

Regarding claim 11, the claimed limitation is accommodated with respect to claim 3.

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Regarding claim 12, the claimed limitation is accommodated with respect to claim 4.

Regarding claim 13, the claimed limitation is accommodated with respect to claim 5.

Regarding claim 14, the claimed limitation is accommodated with respect to claim 6.

Regarding claim 15, the claimed limitation is accommodated with respect to claim 7.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ide et al (US 6,304,292) in view of Irie et al (US 5,644,409).

Regarding claim 8, Ide discloses that the plurality of lines are the current line and a preceding line (col. 9, lines 17-22). Ide does not teach the plurality of lines comprising a current line and preceding lines. However, Irie teaches that in setting black reference value by averaging, it is preferable to incorporate not only data corresponding to one line but also data

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corresponding to a plurality of predetermined lines, for example, eight lines by the line CCD 26.

The reason for this is that the black reference value is stabilized using the average value of the line data (see col. 9, lines 52-60).

Therefore, it would have been obvious to one of ordinary skill in the art to provide an alternate configuration of moving averaging the black reference values by enabling the current line and several preceding lines for obtaining the black reference value for each line because such method would stabilize the black reference value.

Regarding claim 16, the claimed limitations are analyzed with respect to claim 8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (703) 605-4246. The examiner can normally be reached on Monday - Thursday, 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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NT.

May 7, 2003

A handwritten signature in black ink, appearing to read 'Andrew Christensen', is written over a horizontal line.

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600